

**CITY OF LODI  
COUNCIL COMMUNICATION**

**AGENDA TITLE:** Public Hearing to Receive Comments on and Consider Accepting the City of Lodi's Public Health Goals Report

**MEETING DATE:** August 18, 2004

**PREPARED BY:** Public Works Director

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**RECOMMENDED ACTION:** That the City Council conduct a public hearing to receive comments on and consider accepting the required Public Health Goals Report.

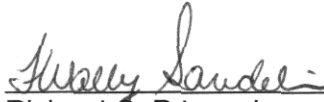
**BACKGROUND INFORMATION:** City staff has prepared the attached report comparing Lodi's drinking water with California EPA's public health goals (PHGs) and with the US EPA's maximum contaminant level goals (MCLGs). PHGs and MCLGs are not enforceable standards and no action to meet them is mandated.

California Code of Regulations, Title 22, Section 116470 mandates that a report be prepared every three years. The report is intended to provide information to the public, in addition to the Annual Water Quality Report mailed to each customer in April 2004. On June 30, 2004, a public notice appeared in the *Lodi News-Sentinel* informing interested parties of the Public Health Goals Report and its availability.

The law also requires that a public hearing be held (which can be part of a regularly scheduled public meeting) for the purpose of accepting and responding to public comment on the report. A notice of public hearing was published in the *Lodi News-Sentinel* on July 10, 2004.

Our water system complies with all of the health-based drinking water standards and maximum contaminant levels (MCLs), as required by the California Department of Health Services and the US EPA. No additional actions are required or recommended.

**FUNDING:** Not applicable.

  
Richard C. Prima, Jr.  
Public Works Director

Prepared by Frank Beeler, Assistant Water/Wastewater Superintendent

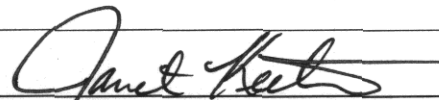
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Attachment

cc: Del Kerlin, Assistant Water/Wastewater Superintendent  
Mike Schafer, Laboratory Services Supervisor

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**APPROVED:**

  
Janet S. Keeter, Interim City Manager

CITY OF LODI  
REPORT ON WATER QUALITY  
RELATIVE TO PUBLIC HEALTH GOALS  
JUNE, 2004

Background

Provisions of the California Health and Safety Code, Title 22, Section 116470, specify that larger water utilities (more than 10,000 service connections), are required to prepare a special report every three years detailing if their water quality measurements have exceeded any Public Health goals (PHGs). These are **non-enforceable** goals established by the Cal-EPA's Office of Environmental Health Hazard Assessment. As of January 1, 2004 Cal-EPA has adopted 71 PHGs. The law also requires that where Cal-EPA has not adopted a PHG for a constituent, the water suppliers are to use the enforceable Maximum Contaminant Level Goals (MCLGs) adopted by the United States Environmental Protection Agency (U.S. EPA). Only constituents which have a California primary drinking water standard and for which either a PHG or MCLG has been set are to be addressed per regulations.

The law specifies what information is to be provided in the report. If a constituent was detected in the water supply at a level exceeding an applicable PHG or MCLG, this report provides the information required by law. Included are:

- The numerical public health risk associated with the Maximum Contaminant Level (MCL) and the PHG or MCLG;
- The category or type of risk to health that could be associated with each constituent;
- The best treatment technology available that could be used to reduce the constituent level;
- An estimate of the cost to install that treatment if it is appropriate and feasible.

What are PHGs?

PHGs are Public Health Goals set by the California Environmental Protection Agency's Office of Environmental Health Hazard Assessment and are based solely on public health risk considerations. None of the practical risk-management factors that are considered by the U.S. EPA or the California Department of Health Services in setting enforceable drinking water standards (Maximum Contaminant Levels or MCLs) are considered in setting the PHGs. These factors include analytical detection capability, treatment technology available, benefits and costs. The PHGs are **not enforceable and are not required to be met** by any public water system. MCLGs are the federal equivalent to PHGs.

Water Quality Data Considered:

All of the water quality data collected by our water system in 2003 for purposes of determining compliance with drinking water standards was considered. This data was all summarized in the attached 2003 Annual Water Quality Report which was mailed to our

customers in April 2004. The attached 2003 Annual Water Quality Report also contains useful definitions for PHG, MCLG, MCL, microgram per liter, and milligram per liter.

Guidelines Followed:

The Association of California Water Agencies prepared guidelines for water utilities to use in preparing these required reports, and these guidelines were used in the preparation of our report. No guidance was available from state regulatory agencies.

Best Available Treatment Technology and Cost Estimates:

Both the U.S. EPA and the California Department of Health Services adopt what are known as Best Available Technologies or BATs which are the best known methods of reducing contaminant levels to the MCL. Costs can be estimated for such technologies. However, since many PHGs and all MCLGs are set much lower than the MCL, it is not always possible, nor feasible to determine what treatment is needed to further reduce a constituent downward to or near the PHG or MCLG, many of which are set at zero. Estimating the costs to reduce a constituent to zero is difficult, if not impossible, because it is not possible to verify by analytical means that the level has been lowered to a zero. In some cases, installing treatment to try and further reduce very low levels of one constituent may have adverse effects on other aspects of water quality. For example; to meet the Copper PHG, chemicals to further coat home plumbing would need to be added to Lodi's drinking water, and in GAC treatment systems, more frequent change outs of carbon and larger vessels keeping water in contact with activated carbon longer can both increase the risk of bacterial contamination.

The estimates below reflect only wellhead treatment capital and annual operation and maintenance costs for typical wells. Design, potential costs for additional land and other site specific requirements are not included. These costs are not indicative of the total past and potential future costs to remediate groundwater throughout Lodi.

Constituents Detected That Exceed a PHG or a MCLG:

The following is a discussion of constituents that were detected in one or more of our drinking water sources at levels above the PHG, or if no PHG, above the MCLG.

Trichloroethylene (TCE): The PHG for TCE is 0.8 micrograms per liter (ug/L or parts per billion). The MCL or drinking water standard for TCE is 5 ug/l. We detected TCE at levels not exceeding the MCL in the discharges from two (2) of Lodi's 25 City Wells used in 2003. The averages for these City Wells in 2003 were:

City Well No. 2	-	1.9 ug/l
City Well No. 24	-	0.33 ug/l

*(City Well No. 24 - for information only. The above level is below the State PHG but is higher than the MCLG. This well was not included in the cost analysis below.)*

\*All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual and maintenance costs divided by 23,000 customers.

The category of health risk associated with TCE, and the reason that a drinking water standard was adopted for it, is the people who drink water containing TCE above the MCL throughout their lifetime could theoretically experience an increased risk of getting cancer. The California Department of Health Services says that "Drinking water which meets this standard (the MCL) is associated with little to none of this risk and should be considered safe with respect to TCE." (*CDHS Blue Book of drinking water law and regulations, Section 64468.2, Title 22, CCR.*) The Best Available Technology for TCE to lower the level below the MCL is either Granular Activated Carbon or Packed Tower Aeration. Since the TCE level in these two City Wells is already below the MCL, a Granular Activated Carbon Treatment System with larger vessels would likely be required to attempt to keep TCE levels to below 0.8 ug/L. The estimated cost to install such a treatment system on one City Well and enhance the capacity on one City Well with an existing treatment system that would reliably reduce the TCE level to below 0.8 ug/L would be approximately \$400,000 and require annual Operation and Maintenance at a cost of approximately \$62,000 per year. This would result in an assumed increased cost for each customer of approximately \$6\*.

Dibromochloropropane (DBCP): The PHG for DBCP is 1.7 nanograms per liter (ng/L or parts per trillion). The MCL for DBCP is 200 ng/L. We detected DBCP at levels not exceeding the MCL in the discharges from 10 of Lodi's 25 City Wells used 2003. The annual averages for these City Wells in 2003 were:

City Well No. 1R	-	90 ng/l
City Well No. 6R	-	140 ng/l
City Well No. 8	-	180 ng/l
City Well No. 13	-	90 ng/l
City Well No. 14	-	100 ng/l
City Well No. 17	-	170 ng/l
City Well No. 18	-	150 ng/l
City Well No. 19	-	140 ng/l
City Well No. 20	-	23 ng/l
City Well No. 21	-	10 ng/l

The category for health risk associated with DBCP, and the reason that a drinking water standard was adopted for it, is the people who drink water containing DBCP above the MCL throughout their lifetime could theoretically experience an increased risk of getting cancer. The California Department of Health Services says that "Drinking water which meets this standard (the MCL) is associated with little to none of this risk and should be considered safe with respect to DBCP." (*CDHS Blue Book of drinking water law and regulations, Section 64468.3, Title 22, CCR.*) The numerical health risk for an MCLG of zero is zero. The Best Available Technology for DBCP to lower the level below the MCL is either Granular Activated Carbon or Packed Tower Aeration. To attempt to maintain the DBCP levels at zero, Granular Activated Carbon Treatment Systems with longer empty bed contact times and more frequent carbon change-outs would likely be required. The estimated cost to install such a treatment system on eight City Wells, and enhance capacities on six City Wells with

\*All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual and maintenance costs divided by 23,000 customers.

existing treatment systems that would reliably reduce the DBCP level to zero would be approximately \$3.2 million. The increased annual Operation and Maintenance costs would be approximately \$470,000 per year. This would result in an assumed increased cost for each customer of approximately \$34 per year\*. (Note: this increase cost may not be reimbursable under the terms of Lodi's settlement agreement with DBCP manufacturers.)

1,1,2,2- Tetrachloroethylene (PCE) : The PHG for PCE is 0.06 micrograms per liter (ug/l or parts per billion). The MCL or drinking water standard for PCE is 5 ug/l. We detected PCE at levels not exceeding the MCL in the discharges from three (3) of Lodi's 25 City Wells used in 2003. The averages of these City Wells in 2003 were:

City Well No. 6R	-	0.61 ug/l
City Well No. 8	-	0.62 ug/l
City Well No. 12	-	0.54 ug/l

The category of health risk associated with PCE, and the reason that a drinking water standard was adopted for it, is the people who drink water containing PCE above the MCL throughout their lifetime could theoretically experience an increased risk of getting cancer. The California Department of Health Services says that "Drinking water which meets this standard (the MCL) is associated with little to none of this risk and should be considered safe with respect to PCE." (*CDHS Blue Book of drinking water law and regulations, Section 64468.2, Title 22, CCR.*) The Best Available Technology for PCE to lower the level below the MCL is either Granular Activated Carbon or Packed Tower Aeration. Since the PCE level in these three City Wells is already below the MCL, a Granular Activated Carbon Treatment System with larger vessels would likely be required to attempt to keep PCE levels below the PHG. The estimated cost to install such a treatment system on three City Wells that would reliably reduce the PCE level to the PHG would be approximately \$1.2 million and require annual Operation and Maintenance at a cost of approximately \$145,000 per year. This would result in an assumed increased cost for each customer of approximately \$11\*.

Coliform Bacteria: In 2003, we collected 972 samples from our distribution system for coliform analysis. Of these samples, 0.4% were positive for coliform bacteria. In 2003 a maximum of 1.3% of these samples were positive for one month.

The MCL for coliform is 5% positive samples of all samples per month and the MCLG is zero. The reason for the coliform drinking water standard is to minimize the possibility of the water containing pathogens which are organisms that cause waterborne disease. Because coliform is only an indicator of the potential presence of pathogens, it is not possible to state a specific numerical health risk. While U.S. EPA normally sets MCLGs "at a level where no known or anticipated adverse effects on persons would occur" they indicate that they cannot do so with coliforms.

Coliform bacteria are organisms that are found just about everywhere in nature and are not generally considered harmful. They are used as an indicator because of the ease in

\*All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual and maintenance costs divided by 23,000 customers.

monitoring and analysis. If a positive sample is found, it indicates a potential problem that needs to be investigated and follow up sampling done. It is not at all unusual for a system to have an occasional positive sample. It is difficult, if not impossible, to assure that a system will never get a positive sample. A further test that is performed on all total coliform positive results is for Fecal Coliform or E. Coli. There were no positive fecal Coliform or E. Coli results in 2003.

To reduce the number of positive results for coliform bacteria, the City of Lodi occasionally chlorinates the water system. The sources of water (City Wells) and all new or repaired water mains follow disinfection procedures and pass bacteriological testing before being allowed "on-line".

Full time chlorination will not guarantee that a system will never get a positive sample. If the City were to go to full time chlorination of the drinking water system, the estimated cost to install chlorine generation systems on 25 City Wells would be approximately \$880,000 and annual Operation and Maintenance cost would be approximately \$55,000 per year. This would result in an assumed increased cost for each customer of approximately \$6 per year.\*

Copper: The PHG for copper is 0.17 milligrams per liter (mg/L or parts per million). There is no MCL for Copper. Instead the 90<sup>th</sup> percentile value of all samples from household taps in the distribution system cannot exceed an Action Level of 1.3 mg/L.

The category of health risk for copper is gastrointestinal irritation.

All of Lodi's source water samples for copper in 2003 were less than the PHG. Based on sampling of the distribution system in 2003, our 90<sup>th</sup> percentile value for copper was 0.41 mg/L.

Our water system is in full compliance with the Federal and State Lead and Copper Rule. Based on sampling, it was determined, based to State regulatory requirements, that Lodi meets the Action Level for copper. Therefore, based on criteria set forth by the California Department of Health Services we meet the criteria for "optimized corrosion control" for our system.

In general, optimizing corrosion control is considered to be the best available technology to deal with corrosion issues and with any copper findings. We continue to monitor our water quality parameters that relate to corrosivity, such as the pH, hardness, alkalinity, total dissolved solids, and will take action if necessary to maintain our system in an "optimized corrosion control" condition.

Since we are meeting the "optimized corrosion control" requirements, there is no apparent reason to initiate additional corrosion control treatment as it involves the addition of other chemicals and there could be additional water quality issues raised. Therefore, no estimate of cost has been included.

\*All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual and maintenance costs divided by 23,000 customers.

Recommendations For Further Action:

The drinking water quality of the City of Lodi Public Water System meets all State of California, Department of Health Services and U.S. EPA drinking water standards set to protect public health. To further reduce the levels of the constituent's identified in this report that are already below the Maximum Contaminant Levels established by the State and Federal government, additional costly treatment processes would be required.

The effectiveness of the treatment processes to provide any significant reductions in constituent levels at these already low values is uncertain. The theoretical health protection benefits of these further hypothetical reductions are not at all clear and may not be quantifiable. Therefore, staff is not recommending further action at this time. However, the point of this process is to provide you with information on water quality in Lodi and rough costs to make certain improvements.

This report was completed by City of Lodi Public Works Department staff. Any questions relating to this report should be directed to: City of Lodi, Assistant Water/Wastewater Superintendent Frank Beeler, 1331 South Ham Lane, Lodi, CA 95242 or call (209) 333-6740.

\*All annual customer costs were based on an assumed annualized cost of capital expenditures equal to 10% of capital costs plus annual and maintenance costs divided by 23,000 customers.

# **Annual Water Quality Report for 2003**

City of Lodi, Published April 2004

*(Este informe contiene informacion muy importante sobre su agua potable. Traduzcalo o hable con alguien que lo entienda bien.)*

This 15th Annual Water Quality Report summarizes testing performed on Lodi's water supply by State certified laboratories. This report follows the "Consumer Confidence Report" (CCR) format required by the U.S. Environmental Protection Agency and the State of California.

## **WHO ARE WE?**

In 1910 your City of Lodi Water Utility officially began operation along with the Electric Utility, and for 93 years, the water system has been owned by the Citizens of Lodi. Ninety-two years ago there were only two wells and a few miles of water mains. In 2003 there were 25 wells, over 210 miles of mains, a water tower and a 1-million-gallon storage tank. Lodi delivers water to approximately 23,000 residential, commercial and industrial customers.

Water rates, system expansion projects, and significant purchases are authorized by the Lodi City Council, which serves as the water utility's official regulatory body. **Lodi City Council meetings are open to the public and are scheduled for the first and third Wednesdays of each month at 305 West Pine Street in Lodi at 7:00 p.m.**

## **YOUR DRINKING WATER SYSTEM**

25 computer controlled wells, located throughout the City, provide high quality groundwater, our sole source of supply. The wells operate automatically on water pressure demand so that when water use increases, more wells come on line. A new well is planned for 2004 to keep up with water supply demands. However, the groundwater basin is being depleted. Lodi has purchased rights to some surface water in the Mokelumne River. The City is currently studying the most effective and cost efficient use of this surface water.

Currently seven wells are fitted with emergency diesel-powered generators. (While these generators will help maintain water pressure during power outages, please refrain from using water during power outages to save the capacity for emergency uses, i.e., fire fighting.) The water delivered to your tap meets or is better than all federal and state water quality standards.

## **BACTERIOLOGICAL WATER QUALITY — CHLORINATION**

Lodi takes over 20 samples per week from throughout Lodi's water distribution system for bacterial water quality. In 2003 the City of Lodi's drinking water met all bacteriological standards.

The water may be periodically chlorinated as a proactive step to help keep the water system in compliance with strict bacteriological standards, however, Lodi's water does not normally contain chlorine. The City will make an effort to inform you in local papers before your water is chlorinated. When necessary however, the drinking water may be chlorinated before you can be informed.

Recently the City of Lodi was ordered to start full time chlorination on the water system. After discussing the issue in detail with State regulators, it was found that there was a misunderstanding on the results of City bacteriological testing and the order was rescinded. The City is also following the development of U.S. EPA draft regulations which may require that nearly every groundwater system like Lodi's chlorinate year-round.

## **DRINKING WATER SOURCE ASSESSMENT**

"An assessment of the drinking water sources for the City of Lodi's water system was completed in February 2003. The sources are considered most vulnerable to the following activities: gas stations (current and historic), chemical/petroleum processing/storage, metal plating/finishing/fabricating, plastic/synthetics producers, dry cleaners, known contaminant plumes, sewer collection systems, fleet/truck/bus terminals, machine shops, utility stations-maintenance areas, agricultural drainage, and photo processing/printing."

A copy of the completed assessment is available at the Public Works Department, City of Lodi, 1331 South Ham Lane, Lodi, CA 95242. You may request that a copy be sent to you by contacting Frank Beeler at (209) 333-6740. A copy of the complete assessment is also available at the Department of Health Services, Drinking Water Field Operations Branch, Stockton District Office, 31 E Channel Street, Room 270, Stockton, California 95202. You may also request that a copy be sent to you by contacting Joseph O. Spano, District Engineer, at (209) 948-7696.



## DOWNTOWN SOILS CLEAN-UP

*The City, working with regulatory agencies in a cooperative fashion, is pursuing a resolution to a contamination problem in the north and central downtown Lodi area. While NO operating wells are out of compliance with any drinking water standards, there is PCE (Tetrachloroethylene) and TCE (Trichloroethylene) found in soils and shallow groundwater. The City continues to work towards clean-up/containment of these dry cleaning and industrial solvents through litigation and mediation with the various potentially responsible parties.*

## DBCP (Dibromochloropropane) UPDATE

DBCP was used by area farmers to kill nematodes in vineyards. DBCP was banned in California in 1977, but is still present in trace levels in some groundwater. The City of Lodi used 25 wells to provide drinking water in 2003. The wells are rotated so over the course of time, water being delivered is a blend from these wells. Eleven of Lodi's wells had no detectable DBCP. Six wells have filters to remove DBCP. The remaining eight meet State and Federal standards, but have trace amounts of DBCP. **The result is that the people of Lodi are being served water below the DBCP level deemed safe by the U.S. EPA and the State of California.**

DBCP has been shown to increase cancer nodules in rats and mice when exposed to very high levels over their lifetimes. In theory these chemicals may also increase the risk of cancer in humans. Drinking water standards are set to reduce this risk and include a safety factor for the general population and take into account the cost and practicality of removing the particular contaminant. While there are scientists who say this theory is not justifiable, there are also those who feel that the standards do not protect sub-groups, such as children.

As a counterpoint, this theoretical risk of cancer has also been applied to many chemicals that occur in everyday foods. When chemicals that are found in everyday foods are tested in the same way, some scientists have found that many foods have a greater theoretical cancer hazard than DBCP in drinking water.

For more info, see the web site: <http://potency.berkeley.edu/text/lehr.html> (to better understand, the above web site, DBCP levels in Lodi's water would have a HERP% of approximately 0.0005).

The U.S. EPA and State of California drinking water standard for DBCP has been set at 0.2 ppb to reduce the theoretical risk of cancer. This theoretical risk is based on lifetime (70 years) exposure and drinking about two quarts of water every day. The limit of 0.2 ppb equals one drop in 66,000 gallons of water. It would take over 350 years to drink 66,000 gallons of water at 2 quarts/day. Water meeting this standard is considered safe with respect to DBCP by the U.S. EPA and State of California Department of Health Services.

In 1996 the City settled a lawsuit against DBCP manufacturers, who have already paid the City for a large portion of Lodi's costs related to DBCP treatment. The DBCP manufacturers will continue to pay a large portion of the City's DBCP related costs for the settlement's 40-year life.

**If you have any questions about this report or Lodi's water quality, please contact:**

*Assistant Water/Wastewater Superintendent • Frank Beeler*

*1331 S. Ham Lane, Lodi, CA 95242 • Telephone: (209) 333-6740 • E-mail: [fbeeler@lodi.gov](mailto:fbeeler@lodi.gov)*

**To better understand the report, please note the description of terms and abbreviations**

### Terms and Abbreviations Used:

**Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible. Secondary MCL's are set to protect the odor, taste, and appearance of drinking water.

**Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

**Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by the U.S. Environmental Protection Agency.

**Regulatory Action Level (AL):** The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

**Primary Drinking Water Standard or PDWS:** MCLs and MRDLs for contaminants that affect health along with their monitoring and reporting requirements, and water treatment requirements.

**Maximum residual disinfectant level (MRDL):** The level of a disinfectant added for water treatment that may not be exceeded at the consumer's tap.

**Maximum residual disinfectant level goal (MRDLG):** The level of a disinfectant added for water treatment below which there is no known or expected risk to health. MRDLGs are set the U.S. Environmental Protection Agency.

**mg/L or ppm:** Milligrams per liter, or parts per million (one ppm equals a concentration of about one cup in a 60,000 gallon swimming pool).

**ug/L or ppb:** Micrograms per liter, or parts per billion (one ppb equals about 4.5 drops in a 60,000 gallon swimming pool).

**ppt:** Parts per trillion (one ppt equals less than 1/200 of a drop in a 60,000 gallon swimming pool).

**pCi/L:** Picocuries per liter (a measurement of radiation).

NA: Not Applicable.

ND: Not Detected at measurable amounts for reporting purposes.

Grains/gal: Grains per gallon. A hardness measurement often used for softeners and dishwashers. (17.1 mg/L = 1 grain/gal).

umhos/cm: Micromhos per centimeter (a measurement of conductance).

< Means less than the amount shown.

> Means more than the amount shown.

## City of Lodi Annual Water Quality Report for 2003

(published April 2004)

Regulated Inorganic Chemicals *2001-2003 Data	MCL	Average of Lodi Wells	Range of Individual Detections	PHG or (MCLG)	Major sources in Drinking water
Aluminum, mg/L	1	0.024	0.22-ND	0.6	Erosion of natural deposits, residue from some surface water treatment processes
Arsenic, ug/L	50	4.2	9.0-ND	NA	Erosion of natural deposits (see message below)
Barium, mg/L	1	0.064	0.23-ND	2	Erosion of natural deposits
Fluoride, mg/L	1.4	0.11	0.22-ND	1	Erosion of natural deposits
Nitrate as NO <sub>3</sub> , mg/L	45	8.6	36-ND	45	Leaching from fertilizer use; leaching from septic tanks and sewage; erosion of natural deposits (see Nitrate message)

Bacterial Water Quality Coliform Bacteria 2003 Data	MCL	Total Positive	Monthly High-Low Range	PHG or (MCLG)	Major sources in Drinking water
Total Coliform, Positive	5% /month	0.5%	1.3%- 0%	(0)	Naturally present in the environment
Fecal Coliform & E. coli	>1/mo.	0	0 - 0	(0)	Human and animal fecal waste

Radioactivity, pico Curies per Liter *1999-2003 Data	MCL	Average of Lodi Wells	Range of Individual Detections	PHG or (MCLG)	Major sources in Drinking water
Gross Alpha, pCi/L	15	4.95	15.15-0.96	(0)	Erosion of natural deposits
Radon, pCi/L	NA	378	568-268	NA	Erosion of natural deposits (See message)
Uranium, pCi/L	20	5.81	11.7-2.57	NA	Erosion of natural deposits

Organic Chemicals with at least one confirmed detection in an operational City Well						
Regulated Organic Chemicals 2003 Data	MCL	Average of Lodi Wells	Range of Individual Detections	PHG or (MCLG)	Major sources in Drinking water	Comments:
Tetrachloroethylene, (PCE) ppb	5	0.07	1.3** - ND	0.06	Discharge from factories, dry cleaners, and auto shops (metal degreaser)	Found in Wells # 6R, 8 & 12 at levels below the MCL.
1,1-Dichloroethylene (1,1-DCE), ppb	6	0.02	0.81**- ND	10	Discharge from industries. Local ground contamination from businesses using the chemical.	Only in Well # 2 at levels below the MCL
Trichloroethylene (TCE), ppb	5	0.09	3.0**- ND	0.8	Discharge from industries. Local ground contamination from businesses using the chemical. Breakdown product of Tetrachloroethylene (PCE).	Found in Wells # 2 & 24 at levels below the MCL.

<b>Dibromochloropropane (DBCP), ppt</b>	200	40	350** - ND	1.7	Banned nematocide that may still be present in soils due to runoff/leaching from former use on vineyards.	See DBCP Update
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<b>Secondary Standards Aesthetic Purposes</b>	<b>Secondary</b>	<b>Average of Lodi</b>	<b>Range of Individual</b>	
<b>*2001-2003 Data (see note)</b>	<b>MCL</b>	<b>Wells</b>	<b>Detections</b>	<b>Typical Source of Contaminant</b>
<b>Aluminum, ug/L</b>	<b>200</b>	<b>24</b>	<b>220-ND</b>	<b>Erosion of natural deposits</b>
<b>Chloride, mg/L</b>	<b>500</b>	<b>15</b>	<b>55-2.8</b>	<b>Runoff/leaching from natural deposits; Seawater influence</b>
<b>Color-Units</b>	<b>15</b>	<b>1.8</b>	<b>5-ND</b>	<b>Naturally-occurring organic material</b>
<b>Foaming Agents (MBAS) ug/L</b>	<b>500</b>	<b>2.2</b>	<b>55-ND</b>	<b>Substances that form ions in water, seawater influence</b>
<b>Specific Conductance, umhos/cm</b>	<b>1600</b>	<b>340</b>	<b>800-93</b>	<b>Municipal and industrial waste discharges</b>
<b>Sulfate, mg/L</b>	<b>500</b>	<b>15</b>	<b>35-ND</b>	<b>Runoff/leaching from natural deposits; industrial wastes</b>
<b>Total Dissolved Solids, mg/L</b>	<b>1000</b>	<b>243</b>	<b>500-82</b>	<b>Runoff/leaching from natural deposits</b>
<b>Turbidity, NTU Units</b>	<b>5</b>	<b>0.11</b>	<b>0.49-0.02</b>	<b>Soil Runoff</b>

*Note: Aesthetic problems are only associated with taste, smell, and other problems which are not a health risk.*

<b>Lead &amp; Copper Rule Customer Tap Monitoring 2003 Data</b>	<b>AL (Action Level)</b>	<b>Average 90th Percentile</b>	<b>Range of Individual Detections</b>	<b>PHG or (MCLG)</b>	<b># Samples Exceeding AL (of 52 samples from 52 sites)</b>	<b>Major sources in Drinking Water</b>
<b>Lead, 90th %, ug/L</b>	<b>15</b>	<b>&lt;5.0</b>	<b>5.2-ND</b>	<b>2</b>	<b>0</b>	<b>Internal erosion of household plumbing</b>
<b>Copper, 90th %, mg/L</b>	<b>1.3</b>	<b>0.41</b>	<b>0.55-ND</b>	<b>0.17</b>	<b>0</b>	<b>systems; erosion of natural deposits</b>

<b>Unregulated Contaminants Detected 2003 Data</b>	<b>AL (Action Level)</b>	<b>Average of Lodi Wells</b>	<b>Range of Individual Detections</b>
<b>DCPA (total di-an-mono acid degredates), ug/L</b>	<b>NA</b>	<b>0.032</b>	<b>1.6-ND</b>
<b>Trichloropropane, ug/L</b>	<b>50</b>	<b>26</b>	<b>37-10</b>
<b>Vanadium, ug/L</b>	<b>0.005</b>	<b>0.0049</b>	<b>0.049-ND</b>

#### Other non-regulated water constituents found in your water (for your information only)

<b>Non-regulated water constituents, *2001-2003 Data</b>	<b>Average of Lodi Wells</b>	<b>Range of Detections</b>
<b>Total Hardness, as mg/L</b>	<b>129</b>	<b>330-30</b>
<b>Total Hardness, as grains/gal.</b>	<b>7.6</b>	<b>19-1.8</b>
<b>Calcium, mg/L</b>	<b>29</b>	<b>75-5.9</b>
<b>Sodium, mg/L</b>	<b>21</b>	<b>52-7.2</b>
<b>Potassium, mg/L</b>	<b>6.5</b>	<b>12-2.1</b>
<b>Alkalinity (bicarbonate), mg/L</b>	<b>164</b>	<b>340-55</b>
<b>pH, in pH units</b>	<b>7.3</b>	<b>7.7-6.9</b>
<b>Magnesium, mg/L</b>	<b>14</b>	<b>34-3.7</b>

\* Regulations call for monitoring of some constituents less than once per year because the concentrations on these constituents do not change frequently. Therefore, some of our data, though representative, are more than one year old.

\*\* Averages are used for compliance determination due to the variable nature of individual analyses, and due to the fact that any associated theoretical risks are not acute, but theoretically only after years of exposure to levels above MCLs.

## **THE FOLLOWING MESSAGES ARE REQUIRED BY THE U.S. EPA AND THE STATE OF CALIFORNIA. NOT ALL PORTIONS OF THESE MESSAGES NECESSARILY APPLY TO LODI'S GROUNDWATER.**

- Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at (1-800-426-4791).
- Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. USEPA/Centers for Disease Control (CDC) guidelines on appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from the Safe Drinking Water Hotline (1-800-426-4791).
- The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.
- Contaminants that may be present in source water include:
  - Microbial contaminants, such as viruses and bacteria, that may come from sewage treatment plant, septic systems, agricultural livestock operations, and wildlife.
  - Inorganic contaminants, such as salts and metals, that can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, or farming.
  - Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban storm water runoff, and residential uses.
  - Organic chemical contaminants, including synthetic and volatile organic chemicals, that are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
  - Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, USEPA and the California Department of Health Services (Department) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. Department regulations also establish limits for contaminants in bottled water that must provide the same protection for public health.

- Radon is a naturally occurring radioactive gas that you can't see, taste, or smell. It is found throughout the U.S. Radon can move up through the ground and into a home through cracks and holes in the foundation. Radon can build up to high levels in all types of homes. Radon can also get into indoor air when released from tap water from showering, washing dishes, and other household activities. Compared to radon entering the home through soil, radon entering the home through tap water will in most cases be a small source of radon in indoor air. Radon is a known human carcinogen. Breathing air-containing radon can lead to lung cancer. Drinking water containing radon may also cause increased risk of stomach cancer. If you are concerned about radon in your home, test the air in your home. Testing is inexpensive and easy. Fix your home if the level of radon in your air is 4 picocuries per liter of air (pCi/L) or higher. There are simple ways to fix a radon problem that aren't too costly. For additional information, call your State radon program or call EPA's Radon Hotline (1-800-SOS-RADON).

**ARSENIC:** *After a long debate, the drinking water standard for Arsenic will be lowered from 50 ppb (parts per billion) to 10 ppb. The following message is required for systems that have some sources containing Arsenic below the new standard of 10 ppb, but over half (5 ppb). The average in Lodi's wells is 4.2 ppb and the highest well is 9.0 ppb.*

While your drinking water meets the current standard for arsenic, it does contain low levels of arsenic. The standard balances the current understanding of arsenic's possible health effects against the costs of removing arsenic from drinking water. The California Department of Health Services continues to research the health effects of low levels

of arsenic, which is a mineral known to cause cancer in humans at high concentrations and is linked to other health effects such as skin damage and circulatory problems.

**NITRATE:** *The following message is required for systems that have some sources containing Nitrate below the standard of 45 ppm (as NO<sub>3</sub>), but over half (23 ppm) of the standard. The average of Lodi's wells is 8.6 ppm and the highest well is 36 ppm.*

Nitrate in drinking water at levels above 45 mg/L is a health risk for infants of less than six months of age. Such nitrate levels in drinking water can interfere with the capacity of the infant's blood to carry oxygen, resulting in a serious illness; symptoms include shortness of breath and blueness of the skin. Nitrate levels above 45 mg/L may also affect the ability of the blood to carry oxygen in other individuals, such as pregnant women and those with certain specific enzyme deficiencies. If you are caring for an infant, or you are pregnant, you should ask advice from your health care provider.

## **MTBE**

*MTBE (Methyl-Tert-Butyl-Ether) is a controversial additive to gasoline that has been in the news the past few years. One of the main concerns with MTBE is the threat of leaking from service stations into the groundwater. Monitoring of City wells has NOT detected any traces of MTBE to date.*

*The City has a program of monitoring all City wells for MTBE. Wells that are at greater risk (i.e., closer to gasoline stations) are monitored more frequently.*

## **WATER CONSERVATION**

In 2003, 5.422 billion gallons of water were pumped to meet Lodi's water demands. This is 23% less water use per person than in 1986. As Lodi's and California's populations increase, water conservation becomes an important part of meeting demands for fresh water.

The commitment of the citizens of Lodi to conserving water also helps conserve the electrical energy needed to pump the water to homes and businesses. To further conserve water, electrical energy, and wastewater treatment plant capacity, the City has instituted a rebate program for water saving devices such as low-flow toilets. See details below.

Your diligent water conservation practices, as in the past, are needed in 2004. A report calculated dollar savings from water conservation to be far above the cost of the Water Conservation Program! Your water conservation efforts have also averted millions of dollars in capital costs, helping water rates stay as low as possible. The millions of dollars in capital cost savings can easily be lost if water conservation is not continued.

See the summary of the Lodi Water Conservation Ordinance in the next column.

For more information or to report a water waste, call the Water Conservation office at 333-6829.

## **\$ Water Conservation Rebate Program \$**

The City of Lodi is offering rebates on purchases of Water Conserving devices. The rebates are good for installation at residential and commercial water customers within the City of Lodi.

Rebates of up to \$44 are good for Ultra Low-Flow Toilets rated at 1.6 gallons per flush or less and must be replacing units using a higher volume of water per flush. Rebates of up to \$100 are available for pressure assist PF/2 Ultra Low-Flow 1.6 gallon toilets. Additional rebates of 50% are available on Low-Flow Shower Heads, Insulated Hot Water Blankets, and Hose Bib Manual Timers for outside water hoses.

The program is funded by the Water, Wastewater and Electric Utilities. The rebates, given at the time of purchase, are only available at the following Lodi stores:

**Ace Hardware • 827 West Kettleman Lane**  
**Orchard Super Hardware • 360 South Cherokee Lane**  
**Ferguson Enterprises, Inc • 1435 Academy Street**

**Contact the Water Conservation Office at (209) 333-6740 for more detail**

## **Water Conservation Ordinance Summary**

**Ordinance Requirements — Water waste includes but is not limited to the following:**

1. Allowing a controllable leak of water to go unrepaired.
2. Watering lawns, flower beds, landscaping, ornamental plants or gardens except on watering days as follows:

**Odd-numbered addresses on Wednesday/ Friday/ Sunday; Even-numbered addresses on Tuesday/ Thursday/ Saturday.**  
**(WATERING IS NOT ALLOWED ON MONDAYS)**

3. Watering between **10 a.m. and 6 p.m.** from **May 1 through September 30** each year. **(You may NOT water during these high evaporation times.)**
4. Washing down sidewalks, driveways, parking areas, tennis courts, patios, other paved areas or buildings.
5. Washing any motor vehicle, trailer, boat, moveable equipment except with a bucket. A hose (see # 6 below) shall be used for rinsing only and for not more than three (3) minutes.
6. Use of a hose without a positive shut off nozzle.

**(NO OPEN HOSES)**

7. Allowing excess water to flow into a gutter or any drainage area for longer than three (3) minutes.
  8. Overwatering lawns or landscapes from November 1st through February 28th, or during and immediately after a rain.
- Water Wasting Rates and Enforcement** — Education and cooperation is our first goal, but the following enforcement procedures and charges will be followed for water waste.
- 1st Water Waste** — City will leave an information sheet describing the waste so that it may be corrected.
  - 2nd Water Waste** — City will give written notice requiring corrective action. (Within 12 months of a 1st Water Waste)
  - 3rd Water Waste** — City will give written notice, and a \$35 charge will be added to the next utility bill. (Within 12 months of a 2nd Water Waste)
  - 4th Water Waste** — City will give written notice, and a \$75 charge will be added to the next utility bill. (Within 12 months of a 3rd Water Waste)
  - 5th and Subsequent Water Wastes** — City will give written notice, and a \$150 charge will be added to the next utility bill AND the City may require a water meter and/or flow restrictor to be installed at the waster's expense. (Within 12 months of the previous Water Waste)
- If you have any questions, would like further information concerning water conservation, or to report water waste, please call the Water Conservation Office at 333-6829.



## DECLARATION OF POSTING

### **PUBLIC HEARING TO RECEIVE COMMENTS ON AND CONSIDER ACCEPTING THE CITY OF LODI'S PUBLIC HEALTH GOALS REPORT**

On Thursday, July 8, 2004 in the City of Lodi, San Joaquin County, California, a copy of a Notice of Public Hearing to receive comments on and consider accepting the City of Lodi's Public Health Goals Report (attached hereto, marked Exhibit "A"), was posted at the following four locations:

Lodi Public Library  
Lodi City Clerk's Office  
Lodi City Hall Lobby  
Lodi Carnegie Forum

I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 8, 2004, at Lodi, California.

ORDERED BY:

**SUSAN J. BLACKSTON**  
**CITY CLERK**

---

Jacqueline L. Taylor, CMC  
Deputy City Clerk

A handwritten signature in dark ink, appearing to read "Patricia Ochoa", is written over a horizontal line.

Patricia Ochoa  
Administrative Clerk

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Jennifer M. Perrin, CMC  
Deputy City Clerk



## CITY OF LODI

Carnegie Forum  
305 West Pine Street, Lodi

## NOTICE OF PUBLIC HEARING

Date: August 18, 2004

Time: 7:00 p.m.

For information regarding this notice please contact:

**Susan J. Blackston**

City Clerk

Telephone: (209) 333-6702

### NOTICE OF PUBLIC HEARING

NOTICE IS HEREBY GIVEN that on **Wednesday, August 18, 2004** at the hour of 7:00 p.m., or as soon thereafter as the matter may be heard, the City Council will conduct a Public Hearing at the Carnegie Forum, 305 West Pine Street, Lodi, to consider the following matter:

- a) receive comments on and consider accepting the City of Lodi's Public Health Goals Report

Information regarding this item may be obtained in the office of the Public Works Department, 221 West Pine Street, Lodi, California. All interested persons are invited to present their views and comments on this matter. Written statements may be filed with the City Clerk at any time prior to the hearing scheduled herein, and oral statements may be made at said hearing.

If you challenge the subject matter in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this notice or in written correspondence delivered to the City Clerk, 221 West Pine Street, at or prior to the Public Hearing.

By Order of the Lodi City Council:

A handwritten signature in cursive script, appearing to read "Susan J. Blackston".

Susan J. Blackston  
City Clerk

**Dated: July 8, 2004**

Approved as to form:

A handwritten signature in cursive script, appearing to read "D. Stephen Schwabauer".

D. Stephen Schwabauer  
Interim City Attorney





*Please immediately confirm receipt  
of this fax by calling 333-6702*

CITY OF LODI  
P. O. BOX 3006  
LODI, CALIFORNIA 95241-1910

### ADVERTISING INSTRUCTIONS

SUBJECT: SET PUBLIC HEARING FOR AUGUST 18, 2004, TO RECEIVE COMMENTS ON AND  
CONSIDER ACCEPTING THE CITY OF LODI'S PUBLIC HEALTH GOALS REPORT

## LEGAL AD

PUBLISH DATES: SATURDAY, JULY 10, 2004


TEAR SHEETS WANTED: Three (3) please

SEND AFFIDAVIT AND BILL TO:

SUSAN BLACKSTON, CITY CLERK  
City of Lodi  
P.O. Box 3006  
Lodi, CA 95241-1910

DATED: THURSDAY, JULY 8, 2004

ORDERED BY:

  
PATRICIA OCHOA  
ADMINISTRATIVE CLERK

JACQUELINE L. TAYLOR, CMC  
DEPUTY CITY CLERK

JENNIFER M. PERRIN, CMC  
DEPUTY CITY CLERK

**Verify Appearance of this Legal in the Newspaper – Copy to File**

PLEASE SEND PROOF OF ADVERTISEMENT. THANK YOU!!

LNS	Faxed to the Sentinel at 369-1084 at <u>2:25</u> (time) on <u>7-8-04</u> (date) <u>2</u> (pages)
	<u>DORA</u> Phoned to confirm receipt of all pages at <u>3:25</u> (time) Jac <u>PT</u> Tricia <u>Jen</u> (initials)

## **PUBLIC NOTICE**

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By Order of the Lodi City Council:

Susan J. Blackston  
City Clerk

Dated: July 8, 2004

Approved as to form:

D. Stephen Schwabauer  
Interim City Attorney  
July 10, 2004

— 6893

filed 8-18-04  
Item G-1

## City of Lodi Water System Public Health Goals (PHG)

- State of California requirement
- Not the same as Maximum Contaminant Levels (MCL's)
  - MCL's are legal limits based on various factors including feasibility and cost
  - PHG's are based solely on public health risk considerations
  - PHG's are not enforceable
  - PHG notification intended to better inform the public
- Report format
  - Identify constituent, MCL, PHG
  - Describe "Best Available Technology" to remove/reduce level of constituent
  - Provide cost information (estimates are very generalized and do not take into account site specific factors)
  - Costs shown below are capital and annual operating

- Constituents that exceed a PHG:

<u>Constituent</u>	<u>MCL</u>	<u>PHG</u>	<u>City Detections</u>	<u>BAT; cost</u>	<u>Comments; Risk</u>
Trichlorethylene (TCE)	5 µg/L	0.8 µg/L	1.9 µg/L	GAC or aeration; \$400k plus \$62k/yr	Well 2 (minimum run); cancer risk
Dibromochloropropane (DBCP)	200 ng/L	1.7 ng/L	10 to 180 ng/L	GAC or aeration; \$3.2m plus \$470k/yr	8 wells plus enhanced treatment on 6 wells; cancer risk
Tetrachloroethylene (PCE)	5 µg/L	0.06 µg/L	0.54 to 0.62 µg/L	GAC or aeration; \$1.2m plus \$145k/yr	3 wells; cancer risk
Coliform Bacteria	5% of samples	0%	0.4% (1.3% max. one month)	Full-time chlorination; \$880k, \$55k/yr	Will not guarantee 0%; waterborne disease risk
Copper	None (90% below "Action level" of 1.3 mg/L)	0.17 mg/L	0.41 mg/L @ 90 <sup>th</sup> percentile	Adjust water chemistry for optimized corrosion control; n/a	Lodi's water meets optimized parameters; gastrointestinal irritation risk

- Approximate cost per customer for all measures: \$5.00/month